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ABSTRACT

A unique public/private collaboration of colleges (City University of New York, Fordham University, New York University, St. John's University, and Teachers College at Columbia University) and high schools in New York City is described. The collaborative model's purpose is to attract talented minority high school students to teaching and related educational careers, and to present evaluative data that measure the impact of student participation and long-range outcomes. MENTOR in Education, designed to interest high school students in pursuing careers in teaching, provides a laboratory for joint planning among public and private graduate institutions and the New York City Board of Education. The program also explores alternative approaches to teacher preparation in an urban setting. It is funded by the New York Alliance for the Public Schools, a coalition of civic, corporate, and educational leaders in New York City. Its main components, involving 125 high school juniors and seniors each semester, are peer teaching and work with younger children, college seminars and workshops, site visits to specialized schools, and activities such as journals, micro-teaching, and lesson planning. The mentoring process has been reinforced on several levels: students find their greatest satisfaction in the act of teaching; recruitment into the program has been strengthened by its institutionalization in the respective high school/college pairings and the addition of extrinsic rewards for participation; and extended participation reinforces the mentor experience. Student participant surveys, teacher evaluations, site visits, and follow-up interviews revealed the following: predominance of female participants; participant racial breakdown--49.2% black, 31.2% white, 7.8% Asian, and 9.8% white; greater knowledge about teacher training; and greater awareness of careers in education other than teaching. To alleviate the shortage of minority teachers, new strategies are needed to identify potential candidates at an early phase in career development and provide support systems to sustain them. Two appendices include the MENTOR in Education final student survey and follow-up survey. Tables are included. Contains 9 references. (SM)

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Designing and Implementing A Collaborative Model for Minority Recruitment

by

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Paper presented at Annual Meeting of the Association for the Study of Higher Education, St. Louis, Missouri, November 5, 1988

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This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Adam's Mark Hotel in St. Louis, Missouri, November 3-6, 1988. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

This presentation has three main objectives: (1) to describe a unique public/private collaboration of seven colleges and seven high schools in New York City; (2) to explore the development of collaborative models whose purpose is to attract talented minority high school students to teaching and related educational careers; and (3) to present evaluative data that measure the impact of student participation and long-range outcomes.

Designing the Program

The collaborative approach that links public and private IHE's with urban high schools and a central board of education has rarely been attempted as a coordinated response to meeting the needs of local school systems. MENTOR In Education is funded by The New York Alliance for the Public Schools, a coalition of civic, corporate, and educational leaders in New York City. It is designed to interest high school students in pursuing careers in teaching, providing a laboratory for joint planning among public and private graduate institutions with the New York City Board of Education, and for exploring alternative approaches to teacher preparation in an urban setting. The major components of the project are peer teaching and work with younger children, college seminars and workshops, site visits to specialized schools, and such activities as journals, micro-teaching, and lesson planning. Research and evaluation components yield important insights into the impact of participation among student interns, mentor-teachers, and cooperating teachers in both high schools and elementary schools

that participate in this program.

The New York Alliance was established in 1979 at New York University in recognition of the importance of a strong school system to the economic and social stability of the city. Its members include the Chancellor of the Board of Education, the presidents of the United Federation of Teachers, Council of Supervisors and Administrators, and United Parents Association; the deans of five doctoral degree-granting universities in New York City -- the City University of New York, Fordham University, New York University, St. John's University, and Teachers College at Columbia University -- and representatives of many civic and business organizations. Funds have been raised from private sources in the past eight years to support projects to train principals, recognize outstanding teachers, and conduct research on school programs.

MENTOR In Education emerged in 1984 in response to the teacher shortage and the wave of school reform which had manifested itself in such reports as A Nation at Risk (1983), High School (1983), and Horace's Compromise (1984). Programs to attract minority students to higher education have proliferated in recent years as documented in a state-by-state survey conducted by the State Higher Education Executive Officers and the Education Commission of the States (Mingle and Callan 1987).

Teacher salaries, career mobility, and poor working conditions in urban systems have had a negative impact on the teaching field generally. The 1988 Metropolitan Life survey of teachers found that "41 % of black and Hispanic teachers said they would probably leave

teaching in the next five years; this was particularly true among teachers with less than five years experience in poor urban communities" (Daniels 1988, p. B13). The report points out that "As the proportion of minority teachers falls, role models who could encourage pupils to pursue careers in education will also decrease, along with the importance of academic achievement in general." A Phi Delta Kappan survey of 1,712 high school seniors in 421 high schools found that 22 percent of the seniors surveyed said they would like to become teachers because "they liked helping or working with others" (Clark 1987, p. 503). Those who responded negatively commented on low salaries (28%) and problems and frustrations faced by teachers (24%).

The Council of Great City Schools recently published some alarming statistics in their report, "Challenges to Urban Education: Results in the Making" (cited in Olson and Rodman, 1988). Among their findings were that teacher shortages in the major urban systems exceed teacher shortages in all schools by 2.5 times. The percentage of the general teaching force that are members of minority groups is only 11 percent. While the number of new minority teachers needed annually to fill current demand is estimated at 50,000, only 14,000 minority college students graduate with degrees in education annually.

These findings are borne out in New York City which recruits 3,000-4,000 teachers each year with little or no experience, granting them emergency Temporary Per Diem licenses to fill teaching positions in its 1,000 schools. Its new Chancellor recently commented that 30,000 teachers would be needed in the next

few years to replace the estimated 40 percent now nearing retirement. With these kinds of data before us, a planning group of five faculty and deans representing each of the five universities in the Alliance, met in Fall 1984 to design a pilot program to encourage high school students to consider teaching careers. The concept it adopted (and which was endorsed by the Chancellor's office) paired each university with a neighboring high school in order to expose its seniors to the range of careers in education. Six high schools were initially selected and at the first meeting of the planning committee with the principals, it was decided to offer this program as a regularly scheduled elective. The Board of Education's Division of High Schools agreed to allocate funds to support released time for teacher coordinators who were designated by their principals to recruit students and monitor their progress, working closely with college faculty coordinators in designing a program to carry out overall objectives. The program has now evolved over four years to include seven high schools and seven colleges. Each semester 125 students participate in a combination of field experiences, college seminars, and in-school workshops for which they receive high school or college credit.

Implementing The Program

Several models are followed, including a Pre-Teaching Academy based on a peer tutoring model in which students advance from individual tutoring to small group instruction, team teaching with mentor-teachers, and ultimately, teaching entire high school classes; and "Perspectives in Teaching," a course in which senior

honor students spend four periods each week in two local elementary schools, and on the fifth day, meet at the respective college where a seminar is conducted for college credit. Course titles range from "Careers In Education" to "Cadet Teaching," but the underlying rationale is the same -- to gain knowledge and understanding of the teaching process through direct interaction with students and teachers in classroom settings, supplementing these experiences with orientation to the college environment and to careers in education. The average size of the seven high schools is 3,100; four of these enroll 98-99% minority students: two enroll 80-90% and one enrolls 10%.

Our strategy has been to recruit 125 high school juniors and seniors each term of good academic ability, highly motivated, and able to operate in an unstructured environment. As of Spring 1988, 875 students had completed the program. Periodic planning sessions enable the coordinators to interact and exchange ideas; through this process, concepts that work well in one setting are often introduced into other programs. This has been particularly true of the field experience component that makes extensive use of teachers in mentoring roles.

Evaluating the Program

To gain a more systematic understanding of the outcomes of this program, two kinds of student surveys are conducted: (1) pre- and post-testing of each participant by site, and (2) follow-up surveys of former participants who have now graduated. These are combined with teacher evaluations, periodic site visits, and follow-up interviews.

The student surveys consist of analyses based on comparable data from initial and final surveys administered at each site, using a pretest-posttest approach. Each survey consists of 14 items, eight of which are fixed-choice questions using a Likert-type scale (Appendix A). F tests are conducted to compare the findings from seven sites; T tests are used to compare differences by sex and grade level, and correlated T tests are used to compare the differences between pre- and post-test results. Descriptive statistics discuss each question. Basically, we are looking at differences within and among sites. In the most recent final survey for Spring 1988, the results indicated a great deal of variation in attitudes within sites, which we attributed to a significant increase in mentoring experiences by many of the high school students, some of whom participated for one year rather than one term. What follows is a summary of our findings, and where possible, comparisons with three prior testings (Fall 1986, Spring 1987, and Fall 1987).

Females predominated (71-82%) in all four final surveys. In Spring 1988, 76.9 percent of the participants were female. Although 12th graders clearly predominated among Fall 1986 and Fall 1987 respondents (70% in each case), the grade pattern for the Spring 1988 respondents (55.1% seniors and 44.9% juniors) was comparable to Spring 1987 (54-47%). Table 1 illustrates the male/female and grade level breakdowns. A survey of teacher coordinators indicated that in 1987-88, 49.2 percent of participating high school students were black, 31.2 percent were Hispanic, 9.8 percent were white, 7.8 percent were Asian, and 1.9 percent classified as "other." An

Table 1: Frequency Distributions for Spring 1988, Fall 1987, Spring 1987, & Fall 1986 Final Survey Respondents Categorized by Gender and Grade

	Spring 1988		Fall 1987		Spring 1987		Fall 1987	
	f	%	f	%	f	%	f	%
Males, 11th	10	12.8%	5	5.1%	10	10.2%	8	8.3%
Males, 12th	8	10.3%	16	16.3%	8	8.2%	20	20.6%
Females, 11th	25	32.1%	24	24.5%	43	43.9%	21	21.6%
Females, 12th	35	44.9%	53	54.1%	37	37.7%	48	49.5%
Males	18	23.1%	21	21.4%	18	18.4%	28	28.9%
Females	60	76.9%	77	78.6%	80	81.6%	69	71.1%
Grade 11	35	44.9%	29	29.6%	53	54.1%	29	29.9%
Grade 12	43	55.1%	69	70.4%	45	45.9%	68	70.1%
TOTALS	78		98		98		97	

additional variable in the Spring 1988 initial survey asked whether or not members of their families were teachers or in careers in education other than teaching. An almost even split between "yes" (49.3%) and "no" (51.7%) frequencies was obtained.

Upon conclusion of the program, subjects indicated greater knowledge about teacher training, greater awareness of the existence of careers in education other than teaching, and greater confidence in their knowl[illegible]of non-teaching careers. Students with no family members in [illegible]ducation were more positive about the availability of teaching jobs than with family members who were teachers. Most of the subjects expressed very positive views about the potential for teachers to have an impact on students' lives and those opinions did not change substantially at the end of the program (Table 2). This is not surprising and simply reflects the fact that, at the beginning of the program, most of the subjects also expressed very positive opinions about the potential for teachers to "really make a difference in a student's life;" this was true for males and females and 11th and 12th graders.

Students were asked to identify three of 13 characteristics that they considered the most important for a "good teacher." As shown in Table 3, four items shared the three top rankings across four testings: three focused on the teaching process and the other centered on interpersonal relationships between the teacher and the students. "Knows how to motivate" ranked first and was selected by 53 percent in 1987-88; "makes learning interesting" was selected by 42-47% of respondents; "knows subject matter well" was shared by 40-51% of respondents; while "has a lot of patience" ranked

Table 2: Means, Standard Deviations, and Results of Repeated Measures ANOVAs Comparing Initial and Final Survey Mean Responses to Item #7 of Twice-Tested Spring 1988 Subjects, Categorized by Site, Gender, Grade, and Family in Education Careers

Item 7. How likely is it that one teacher could really make a difference in a student's life? (1=very to 5=not at all)

	N	INITIAL SURVEY Mean	s	FINAL SURVEY Mean	s	F-ratio Between	F-ratio Within
ALL	71	1.65	0.86	1.70	0.90	---	0.26
Site 1	11	1.46	0.82	1.64	0.81	1.94•	0.28
Site 2	8	1.25	0.71	1.50	0.93		
Site 3	11	1.46	0.69	1.27	0.65		
Site 4	9	1.44	0.53	1.44	0.53		
Site 5	10	1.60	0.84	1.80	0.92		
Site 6	10	2.10	0.88	1.90	1.20		
Site 7	12	2.08	1.17	2.25	0.97		
Males	18	1.78	1.00	2.06	1.21	2.53	1.06
Females	53	1.60	0.82	1.59	0.75		
Grade 11	33	1.61	0.79	1.79	0.96	0.05	0.35
Grade 12	38	1.68	0.93	1.63	0.85		
Yes Educ	35	1.69	0.87	1.63	0.81	0.04	0.25
No Educ	36	1.61	0.87	1.78	0.99		

• Significant at .10 level

Table 3: Percents and Ranks of Most Important Teacher Traits Identified in Response to Item #9 by Final Survey respondents in Spring 1988, Fall 1987, Spring 1987, and Fall 1986

Trait	SPRING 1988		FALL 1987		SPRING 1987		FALL 1986	
	%	Rank	%	Rank	%	Rank	%	Rank
•9.1	40%	3.5	43%	3	48%	2	51%	1
•9.2	40%	3.5	36%	4	33%	4	37%	4
•9.3	53%	1	53%	1	83%	1	45%	3
9.4	28%	5	26%	5	26%	5	20%	6
9.5	18%	7.5	14%	8.5	14%	9	20%	5
9.6	12%	9.5	14%	8.5	9%	11	14%	9
9.7	8%	11	4%	12.5	4%	13	2%	13
9.8	12%	9.5	12%	10	10%	10	6%	11
9.9	20%	6	19%	6	20%	6	16%	8
9.10	4%	12.5	4%	12.5	8%	12	5%	12
9.11	4%	12.5	9%	11	17%	8	12%	10
•9.12	45%	2	47%	2	42%	3	47%	2
9.13	18%	7.5	18%	7	18%	7	18%	7
N	76		98		98		97	

closely behind with 33-40 percent.

Seventy percent of the Spring 1988 subjects responded that they would recommend the program to fellow students, the same as in Fall 1987; 71 percent reported that they were more interested in a career in education, exactly comparable to Spring 1987 and higher than Fall 1987 (64%). Percents of "more" responses at the four testing times, by site, are summarized in Table 4, along with the numbers of final survey respondents at those test times. There are some differences among the total group percents from semester to semester. The reason cited most frequently by the Spring 1988 respondents, "because I found that I enjoy working with children," was also cited most frequently by those responding to this item in the three prior testings as shown in table 5.The second most cited reason, "because I found that I can really work well with children," was cited in Spring and Fall 1987 and Spring 1988. Reasons which ranked third, fourth, and fifth varied somewhat between testings, but there was agreement in all four testing times on the reason ranking last, "because I learned about the benefits of educational careers and that attracted me." The 17 subjects indicating less interest in Spring 1988 cited continued interest in a career other than education (71%); discovery that teaching takes more patience than they perceived themselves to have (42%); and continued lack of interest in an educational career (45%). These three reasons were also cited in Fall 1986 and Fall 1987 and in Spring 1987.

In response to a final survey item asking students to rate each of ten factors with respect to their perceived importance in making

Table 4 : Numbers of Subjects Completing Final Surveys and Percents Responding "More" to Item 10 at Each Site for Spring 1988, Fall 1987, Spring 1987, and Fall 1986

Site	SPRING 1988 N	SPRING 1988 %	FALL 1987 N	FALL 1987 %	SPRING 1987 N	SPRING 1987 %	FALL 1986 N	FALL 1986 %
1	12	67%	17	65%	20	70%	21	95%
2	11	64%	11	27%	12	67%	14	57%
3	11	46%	22	46%	20	45%	10	80%
4	10	90%	5	100%	13	100%	9	71%
5	10	90%	14	86%	9	67%	8	89%
6	10	30%	13	62%	11	91%	13	88%
7	14	100%	16	88%	13	77%	8	63%
ALL	78	71%	98	64%	98	71%	97	80%

Table 5 : Percents and Ranks of Reasons Selected for MORE Interest in a Career in Education by Subjects at Each Site in Spring 1988, Fall 1987, Spring 1987, and Fall 1986 Final Surveys

Reason	SPRING 1988 %	SPRING 1988 Rank	FALL 1987 %	FALL 1987 Rank	SPRING 1987 %	SPRING 1987 Rank	FALL 1986 %	FALL 1986 Rank
10a.1	67%	4	65%	3	70%	5	95%	5
10a.2	64%	5	27%	4.5	67%	4	57%	2
10a.3	46%	6	46%	4.5	45%	6	80%	6
10a.4	90%	2	00%	2	00%	2	71%	3
10a.5	90%	1	86%	1	67%	1	89%	1
10a.6	30%	3	62%	6	91%	3	88%	4
10a.7	00%	7	88%	7	77%	7	63%	7
# MORE	55		63		70		78	

a career decision, more than 75 percent identified interest and enjoyment in the field, ability to do the job well, chance to help people, and chance for growth and advancement as the most important. Students in all four semesters attached least importance to "parental/family influence on career choice." The mean ratings assigned to all ten factors are summarized in Table 6 along with the resulting rankings for these items. The two factors rated most highly by the Spring 1988 respondents were also rated most highly in the three previous testings: interest/enjoyment in the field and ability to do the job well. The participants in all four semesters attached least importance to parental/family influence on career choice. Overall, as indicated by the median ranks across the four testings, participants ranked interest/enjoyment in the field first; ability to do the job well, second; chance to help people, third; and chance for growth and advancement, fourth in importance as factors influencing career choice. Less "idealistic" factors tended to be ranked lower: job security (rank=6.5); working conditions (rank=7); salary (rank=8); and length of training required (rank=9).

Students were asked "in what ways classes on a university campus" had helped them during the semester. Seven of the eight listed benefits were selected by more than 50 percent of the respondents in Spring 1988 and the eighth by 49 percent, indicating that subjects considered all of these options as beneficial to them. The two top choices at all four testing times as shown in table 7 were "helped me to learn about different educational careers," and "helped me to learn about different approaches to

Table 6 : Means and Ranks of Responses to Items #11a-#11j by Final Survey Respondents in Spring 1988, Fall 1987, Spring 1987, and Fall 1986

Item	SPR 1988 M	Rank	FALL 1987 M	Rank	SPR 1987 M	Rank	FALL 1986 M	Rank	Mdn Rank
11 a	2.3	9	2.2	9	2.1	9	2.1	9	9
11b	1.9	5	1.8	6	1.6	4	1.7	3.5	4.5
11c	1.5	1	1.4	1	1.4	1.5	1.5	1	1
11d	2.0	8	1.9	8	1.9	8	1.9	6	8
11e	1.6	2	1.5	2	1.4	1.5	1.6	2	2
11f	1.9	7	1.8	7	1.7	5.5	1.9	7	7
11g	1.7	3	1.6	3	1.7	5.5	1.7	3.5	3.3
11h	1.9	6	1.7	5	1.8	7	1.9	8	6.5
11i	1.8	4	1.6	4	1.5	3	1.8	5	4
11j	2.6	10	2.6	10	2.6	10	2.8	10	10

Table 7 : Percents and Ranks for Item #12 Options Selected by Final Survey Respondents in Spring 1988, Fall 1987, Spring 1987, and Fall 1986

Option	SPRING 1988 %	SPRING 1988 Rank	FALL 1987 %	FALL 1987 Rank	SPRING 1987 %	SPRING 1987 Rank	FALL 1986 %	FALL 1986 Rank
12.1	72%	3	68%	2	68%	2.5	73%	1
12.2	66%	4	54%	5	68%	2.5	60%	4.5
12.3	54%	7	42%	8	33%	8	40%	8
12.4	55%	6	43%	7	56%	6	60%	4.5
12.5	82%	1.5	71%	1	85%	1	69%	2
12.6	82%	1.5	58%	3	62%	4	57%	6
12.7	49%	8	55%	4	61%	5	67%	3
12.8	61%	5	49%	6	40%	7	51%	7
# Ss	71		97		94		95	

teaching." The increased emphasis on "hands-on" experience is reflected in the fact that in Fall 1987 and Spring 1988 "helped me to learn how to work with different children," was selected more frequently than in the prior two testings.

Two open-ended questions sought to elicit comments from students regarding what they had learned from their participation and how they thought the program could be improved. Almost 50 percent responded that they had learned the qualities necessary to be a good teacher, that teaching can be a satisfying experience, and that the teacher is an important role model. Fifteen commented that "teaching is hard work" and "takes patience." Suggestions for improvement included creating a "higher level" or second semester program and providing more guest speakers, more teaching time, and more workshops to discuss educational issues.

Tracking the Graduates

The results of the 1987-88 tracking survey are not yet available and I will report on our first tracking survey done last October to determine outcomes for students who participated in 1986-87. Two questionnaire forms were used; one for those who were still in high school (identified as juniors or 11th graders) and one for those who had graduated (identified as seniors or 12th graders). The "senior" survey centered on such post-high school activities as current college attendance and part- or full-time employment. The questions on the "junior" survey were designed to obtain information regarding current teaching-related activities and post-high school plans. The final questions in both surveys asked respondents to rate the extent to which MENTOR in Education

had influenced their college or career plans and to specify the reasons for their assessment. Copies of the two surveys are included as Appendix B.

A total of 190 of the surveys were mailed and 11 returned as undeliverable. Of the 179 delivered questionnaires, 68 were sent to program "juniors" and 111 to program "seniors." The results which follow were derived from a total of 70 usable survey forms representing a group return rate of 39.1 percent (51.% were current seniors; 31.5% had graduated). The relatively low return rate of the latter group can be attributed partly to the high mobility of students once they have graduated from high school, their preoccupation with college, or the fact that they were not then involved in post-high school academic activities. As a consequence, the findings which follow are limited by the extent to which respondents differed from non-respondents, and were, in fact, representative of all 1986-87 participants.

1. Most of the 70 follow-up survey respondents were female (81.4%), in keeping with the male/female ratios evident in the Fall 1986 and Spring 1987 surveys.

2. Almost all (97.1%) of the 70 follow-up survey respondents either planned to go to college upon graduation from high school or were currently enrolled in a two- or four-year college program. However, about one-fourth (26.7%) of those identifying a college major, either planned to major in education when they got to college or declared themselves to be current education majors. In addition, a number of respondents, both present seniors and in-college subjects, who had not specified education as either a

planned or current college major, cited the possibility that teaching might be a future college major or career choice.

The relatively pre-eminent position of education as a planned or current or possible career choice may be a continuation of the trend evident in the final surveys completed by the Fall 1986 and Spring 1987 participants. In those surveys, respondents tended to characterize their interest in education as a career as being "greater" at the end of the program than at the beginning. With due caution, it should be noted that it is unknown whether or not a similar pattern in planned or declared majors would emerge if the return rate had been higher.

3. Few (8.6%) of the graduates who responded to the follow-up survey reported that they were doing any tutoring or teaching, although one-third (34.3%) of the present seniors who responded did report either current tutoring or pre-teaching. Also, almost one-third of the present seniors reported that they were currently serving as teacher aides.

4. The patterns of responses to the questions on the influence of the program on college/career plans by both current seniors and graduates who responded were similar. More than 80 percent of the 70 respondents answered affirmatively with respect to program impact on college/career decisions; fewer than 20 percent responded negatively. Once again, these positive responses parallel those made by final survey respondents in Fall 1986 and Spring 1987 as to "How likely would you be to tell someone else to enroll in MENTOR in Education?", "Why are you more interested in a career in education now?", and "In what ways did classes on a university

campus help you?" This relatively high assessment of the program's impact can only be inferred to the extent that the 70 follow-up survey respondents are representative of the total group of 1986-87 participants.

Conclusions

The high commitment to collaborate and to make this program succeed on the part of a small group of motivated teachers and faculty has reinforced the mentoring process on several levels:

--Teacher coordinators operate in a supportive environment in which the high school principal and the principals of local elementary schools assume leadership roles, teachers are given autonomy, are encouraged to innovate, and to consult regularly with university coordinators on the respective college campuses.

--Students become mentors as they work with younger children in what one coordinator refers to as a "rare ego-building experience." The field work component has transcended in value its initial purpose as a recruitment strategy; students find great satisfaction in helping others learn, and gain in status and respect from their peers, younger children, and mentor-teachers. Some who had only viewed teachers "from the other side of the desk" as authority figures, to quote one student, shift their career goals into teaching either as an immediate or post-college objective.According to one coordinator, "They are surprised and pleased they have developed abilities that are of immediate value to others, and the program strikes a very responsive chord in the development of these black and Hispanic adolescents" (Cody 1987).

--A network is formed in which high school and university personnel interact on several levels, sharing resources and reinforcing each other's role. The culture of the large urban high school rarely allows for autonomy, experimentation, incentives, small classes, trial and error. By the same token, colleges and universities do not often view their service function in terms of inter-institutional collaboration. As the parameters of collaboration have expanded in these four years, involving more high schools, elementary schools, and colleges, the network has been strengthened across sites. This program has provided each institution with opportunities to explore their potential for jointly serving the needs of the teaching profession and New York City's high school population of largely minority students (Noto 1987).

In conclusion, I would like to add the following observations as project director since the program's inception almost five years ago.

1. Recruitment into the program has been strengthened by its institutionalization in the respective high school/college pairings and the addition of extrinsic rewards for participation, i.e., college credit now offered on three campuses and community service credit (a high school requirement).

2. Students find their greatest satisfaction in the act of teaching, the direct interaction they have with younger children and their peers through their internships, combined with on-campus peer-teacher workshops and seminars. Students are more clearly motivated by active involvement in the life of the school, gain

greater understanding of and respect for the teaching process and the importance of education, and greater self-confidence and self-esteem in their adolescent years.

3. Both teachers and college faculty become mentors for their profession as they interpret their roles to students and guide them toward greater understanding of the teaching process. Mentoring therefore occurs on several levels -- the student, the classroom teacher, and the college faculty member.

4. Extended participation reinforces the mentor experience, expands the possibilities for active involvement, and the level of discourse beyond the foundations of teaching. A strong case can be made for a clinical model of teacher training that incorporates graduated internships combined with periodic college seminars as one model for attracting minority students into consideration of teaching careers. While there are difficulties to be overcome in public-private collaboration between higher education and urban schools, these can be overcome with adequate resources, commitment to eliminate the "red tape," and school-based leadership.

To alleviate the shortage of minority teachers, new strategies are needed to identify potential candidates at an early phase in their career development, to provide support systems that sustain them as they explore new possibilities, and to recognize the multiple benefits that accrue from alternative programs with clearly defined objectives. It is often assumed that such programs have to be extensive, costly, and mandatory to have an impact. Our experience has been that modest programs serving discrete groups of interested students are more apt to succeed. While it is true

that the problems in recruiting minority students to teaching careers are vast in relation to current and future demand, MENTOR In Education has the potential to be an effective mechanism for responding to the shortage of qualified teachers in urban schools.

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Appendix A

MENTOR IN EDUCATION - FINAL STUDENT SURVEY

Now that the semester is over, we would like to learn your reactions to the MENTOR In Education program. Please answer the following questions to let us know your thoughts now that you've finished the program. As we wish to compare these responses to your earlier ones, we ask that you give us again the information needed for your "code name." Please let us know the following:

Your Birthday: Month_____ Day_____

Initials of your First and Last Names:_____

Are you Male_____ Or Female _____

Are you in 11th Grade_____ Or 12th Grade_____

The first 8 questions have a rating scale of 1 to 5 following each question. Please answer each one by circling the number which best matches your view. For example, on the first question, if you are very interested, circle 5. If you aren't at all interested, circle 1. If you are somewhat interested, circle 2; and so on.

	Not At All				Very
1. How interested are you <u>now</u> in a career in teaching?	1	2	3	4	5
2. How well-informed are you about the training necessary to become a teacher?	1	2	3	4	5
3. How likely is it for someone to have a job in education which does <u>not</u> involve being a teacher?	1	2	3	4	5
4. How interested are you in a career in education which does <u>not</u> involve being a teacher?	1	2	3	4	5
5. How well-informed are you about careers in education other than teaching careers?	1	2	3	4	5
6. How available are teaching jobs?	1	2	3	4	5
7. How likely is it that one teacher could really make a difference in a student's life?	1	2	3	4	5
8. How likely would you be to tell someone else to enroll in the MENTOR In Education program?	1	2	3	4	5

9. The list below includes characteristics which high school students say describe a "good teacher." Check the THREE characteristics which you think are the most important.

_____ Knows subject matter well.

_____ Has a lot of patience.

_____ Knows how to motivate students to learn.

_____ Really cares about students.

_____ Treats all students equally.

_____ Prepares lessons well.

_____ Knows how to deal with discipline problems.

_____ Takes responsibility for student learning.

_____ Communicates well.

_____ Grades fairly.

_____ Relates well with young people.

_____ Makes learning interesting.

_____ Enjoys teaching very much.

10. Are you now MORE or LESS interested in a career in education as compared to your feelings when you started the MENTOR In Education program?

MORE_____ Now please answer Question 10a

LESS_____ Now please answer Question 10 b

10a. Why are you now MORE interested in a career in education? Select as many of the following reasons as apply for you.

_____ I learned a lot about teaching and I think I can do it.

_____ I found out that there are careers in education other than teaching that interest me.

_____ I had an interest in a career in education and the more I learned about it, the more convinced I became.

_____ I found out that I can really work well with children.

_____ I found out that I enjoy working with children.

_____ I realized that education is important and I want to be part of it.

_____ I learned about the benefits of educational careers and that attracted me.

10b. Why are you LESS interested in a career in education? Select as many of these reasons as apply for you.

_____ I was never really interested in an educational career and I haven't changed my mind.

_____ I'm still more interested in another career that would be better for me.

_____ I found out that teaching takes more patience than I have.

_____ The benefits of an educational career are not good enough.

_____ I found out that I really don't like working with children.

_____ I think there is too much responsibility in teaching.

_____ The people in education are not well-respected for all the work they do.

11. In general, what factors do you consider to be important when making a decision about a career? Some of the factors reported by high school students as being important are listed below. How important are they to you? Circle the number which best matches your view.

	Not At All				Very
a. Length of training required	1	2	3	4	5
b. Availability of jobs in the field	1	2	3	4	5
c. Interest/enjoyment in the field	1	2	3	4	5
d. Salary	1	2	3	4	5
e. Ability to do the job well	1	2	3	4	5
f. Working conditions	1	2	3	4	5
g. Chance to help people	1	2	3	4	5
h. Job security	1	2	3	4	5
i. Chance for growth/advancement	1	2	3	4	5
j. Parental/family influence	1	2	3	4	5

12. As part of the MENTOR In Education program, you took classes on a university campus. In what ways did these classes help you? Select as many of the following benefits as apply to you.

_____ Helped me to learn about what people do in different careers in education.

_____ Helped me to learn about the requirements for different careers in education.

_____ Gave me information about salaries and benefits in educational careers.

_____ Gave me information about the availability of jobs in educational fields.

_____ Helped me to learn about different approaches to learning.

_____ Helped me to learn how to work with many kinds of children.

_____ Helped me to learn about college life.

_____ Helped me to feel more grown up.

13. What is the most important thing you learned from taking part in the MENTOR In Education program?

_____

_____

_____

_____

_____

14. What suggestions would you make to improve this program? (Remember, your answer is confidential).

_____

_____

_____

_____

_____

THANK YOU FOR COMPLETING THIS SURVEY!

Appendix B

MENTOR IN EDUCATION - FOLLOW-UP SURVEY

1. Are you now enrolled in a school or college? YES____ NO____

   If YES, is it a two-year college?____ or a four-year college?____

   or a specialized technical training school?____

   If YES, are you attending full-time?____ or part-time?____

   If YES, what is your planned major or program? _____

   _____

   IF NO, are you planning to attend college or a special tech school

   in the near future? YES____ NO ____

2. Are you now employed part-time? YES____ NO____

   If YES, what type of work?_____

3. Are you now employed full-time? YES____ NO____

   If YES, what type of work? _____

4. Are you now doing any tutoring or teaching? YES____ NO____

   If YES, please describe: _____

5. Looking back--would you say that your participation in the MENTOR IN EDUCATION PROGRAM influenced your career plans?

   ____YES, a lot. In what way? _____

   _____

   ____YES, some. In what way? _____

   _____

   ____No, not much. Why not? _____

   _____

   ____No, not at all. Why not? _____

   _____

ONCE AGAIN, THANK YOU VERY MUCH FOR YOUR TIME AND COOPERATION!

1. Are you now working as a teacher's aide? YES____ NO____

2. Are you now doing any tutoring or teaching? YES____ NO____

   If YES, please describe:_____

   _____

3. After you graduate from high school, are you planning to go on with your education? YES____ NO____

   If YES, in a two-year college?____ or a four-year college?____

   or a specialized technical training school? ____

   If YES, what do you plan to major in at college or in the technical training school? _____

   If NO, what do you plan to do when you graduate from high school?

   _____

   _____

4. Looking back--would you say that your participation in the MENTOR IN EDUCATION PROGRAM influenced your college or career plans?

   _____YES, a lot. In what way?_____

   _____

   _____YES, some. In what way?_____

   _____

   _____NO, not much. Why not?_____

   _____

   _____NO, not at all. Why not?_____

   _____

ONCE AGAIN, THANK YOU VERY MUCH FOR YOUR TIME AND COOPERATION!